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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/003,905 | 11/01/2001 | Jill R. Scott | B-028 | 7741 |
| 7590 | 11/20/2003 | | EXAMINER | |
| Alan D. Kirsch Bechtel BWXT Idaho, LLC P.O. Box 1625 Idaho Falls, ID 83415-3899 | | | GURZO, PAUL M | |
| | | | ART UNIT | PAPER NUMBER |
| | | | | 2881 |

DATE MAILED: 11/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/003,905 | SCOTT ET AL. |
| | Examiner Paul Gurzo | Art Unit 2881 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 02 September 2003.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-106 is/are pending in the application.
 4a) Of the above claim(s) 37-106 is/are withdrawn from consideration.
 5) Claim(s) 15-18 and 33-36 is/are allowed.
 6) Claim(s) 1-13 and 19-31 is/are rejected.
 7) Claim(s) 14 and 32 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 01 November 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) The translation of the foreign language provisional application has been received.
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>1103</u> . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of claims 1-36 in Paper No. 10/003,905 is acknowledged.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13 and 19-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ray (5,861,550).

Regarding claim 1, 550 teaches a laser device comprising a target position (78 or 80), an optical component (76) separated a distance from the target position, a laser energy source (32) separated a distance from the target greater than the distance of the optical component and target, and a laser source manipulation mechanism (14 and 22) that positions the laser source (col. 4, lines 9 - 56 and Fig. 1). 550 does not explicitly teach that the mechanical resolution is less than that spatial resolution. However, it does teach that probe microscopes overcome the resolution limits of previous technologies (col. 1, lines 23-24), and the mechanical adjusting and optical positioning will act in a manner to increase resolution. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to increase resolution for increased detection schemes.

Regarding claims 2 and 3, 550 teaches a vertical and lateral index (14 and 22) that is used for aligning the laser (Abstract), and a pivot point (16) for lateral motion, and it is obvious that some type of reference point is used for proper aligning and pivoting.

Regarding claims 4 and 5, 550 teaches that prior art uses a vacuum chamber to housed the target (col. 1, lines 20-21).

Regarding claims 6,7,22, and 23, 550 teaches a lens (76) and a multi-element optics is a well-known optical component.

Regarding claims 8,9,24, and 25, the use of mirrors (38,44, etc.) teaches on the use of a virtual source, and 550 deals with a scanning microscope.

Regarding claims 10-12, and 26, Fig. 1, 1A, and 1C clearly depict a lateral and vertical rotation during the respective motion, and the lateral and vertical axes intersect where the laser energy emanates (Fig. 1). It is obvious that ratio of distances can be altered based on the lateral and vertical displacement, and Fig. 1 depicts both mechanical and spatial resolution mechanisms.

Regarding claims 13, 30, 31, the use of appropriate linkages and gimbals is well known in the art of mechanical control.

Regarding claims 19 and 20, the above-applied prior art teaches an optical component (76), a laser energy source (32), a laser source manipulation mechanism linking vertical (22) and lateral (14) motion and this leads to alignment of the laser during motion (Abstract). Further, Fig. 1, clearly depicts the claimed source to component distance and target to component distance, and it is obvious that the displacement is such to increase resolution.

Regarding claims 21 and 27-29, Fig. 1 clearly depicts the claimed linkage of vertical and lateral laser motions to the appropriate index, and it depicts a pivot (16) for source motion

coincident with the center of vertical pivot for laser source motion (col. 3, lines 9-56), and it is obvious that the vertical index and lateral index comprise a line.

Allowable Subject Matter

Claims 15-28 and 33-36 are allowed. The closest prior art of record does not teach the use of a laser device with a target, lens, laser source, and manipulation mechanism. However, they do not teach that a desorbed energy detection cell is used.

Claims 14 and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Monnin (5,852,493)

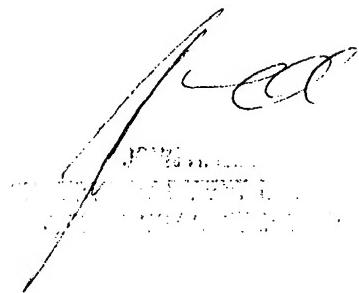
Green et al. (5,867,522)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Gurzo whose telephone number is (703) 306-0532. The examiner can normally be reached on M-Thurs. 7:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Lee can be reached on (703) 308-4116. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

PMG
November 10, 2003

A handwritten signature in black ink, appearing to read "PMG". Below the signature, there is a faint, illegible stamp or mark that appears to be a government agency logo or seal.